Amendments to the Claims

We Claim:

1. (Amended) A medical screw and driver system, comprising:

(A) an elongated screw having external threads and an internal bore extending through ~~said screw~~ at least a portion of the length of said screw, said screw being at least partially formed from a bioabsorbable material;

(B) an elongated driver having a non-circular cross-sectional shape approximating the cross-sectional shape of said bore, said driver being insertable into said bore and being matingly received therein to transfer rotational motion of said driver to said screw, said bore exhibiting a ~~closely mating~~ shrink-fit relative to said driver such that the cross-sectional shape of said bore is closely mated to the cross-sectional shape of said driver and said driver ~~is removable~~ may be withdrawn from said bore without altering said cross-sectional shape of said bore.

2. (Amended) The system of Claim 1, wherein said driver and said bore have a mating taper, each of said driver and said bore exhibiting a diminishing cross-sectional area in the direction of insertion of said driver into said bore.

3. (Original) The system of Claim 1, wherein said bioabsorbable material shrinks upon heating.

4. (Original) The system of Claim 3, wherein said shrinkage is due to crystallization of said bioabsorbable material.

5. (Original) The system of Claim 3, wherein said shrinkage is due to stress relaxation of said bioabsorbable material.

6. (Original) The system of Claim 3, wherein said bioabsorbable material is selected from the group consisting of aliphatic polyesters, polyorthoesters, polyanhydrides, polycarbonates, polyurethanes, polyamides, and polyalkylene oxides.

7. (Original) The system of Claim 6, wherein said screw has an additive to the composition thereof selected from the group consisting of bioabsorbable glass, bioabsorbable ceramic, biocompatible glass and biocompatible ceramic.

8. (Original) The system of Claim 1, where said screw is composed of an 15/85 (vol/vol) blend of TCP/PLA.

9. (Original) The system of Claim 1, wherein said screw is an orthopedic screw.

10. (Amended) A method for increasing driver-to-screw contact in a medical screw and driver system having an elongated screw formed at least partially from a bioabsorbable material and having external threads and an internal bore with a non-circular cross-sectional shape extending through ~~the screw~~ at least a portion of the length of ~~the~~ said screw and an elongated driver having a non-circular cross-sectional shape approximating the cross-sectional shape of ~~the~~ said bore, ~~the~~ said driver being insertable into ~~the~~ said bore and being matingly received therein to transfer rotational motion of said driver to ~~the~~ said screw, said method comprising the steps of:

(A) inserting ~~the~~ said driver into ~~the~~ said bore of ~~the~~ said screw;

(B) heating ~~the~~ said screw

(C) allowing ~~the~~ said screw to cool, said steps (B) and (C) ~~of heating and cooling~~ inducing said screw to shrink whereby said bore exhibits a ~~closely mating~~ shrink-fit relative to said driver such that the cross-sectional shape of said bore is closely mated to the cross-sectional shape of said driver; and ~~such that said driver is removable from said bore.~~

(D) withdrawing said driver from said bore without altering said cross-sectional shape of said bore.

11. (Original) The method of Claim 10, wherein said screw is heated in said step (B) to a temperature at least equal to the glass transition temperature of said screw.

12. (Amended) The method of Claim 10, further ~~including~~ comprising the step (B2) of maintaining ~~the~~ said screw at an elevated temperature after said step (B) ~~of heating~~ and prior to said step (C) ~~of allowing the screw to cool~~.

13. (Amended) The method of Claim 12, wherein ~~the~~ said driver is heated simultaneously with ~~the~~ said screw during said step (B) ~~of heating~~.

14. (Amended) The method of Claim 12, wherein said steps ~~of~~ (B) ~~heating~~, (B2) ~~maintaining~~ and (C) ~~allowing the screw to cool~~ result in the relaxation of the internal stress of ~~the~~ said screw.

15. (Amended) The method of Claim 12, wherein said steps ~~of~~ (B) ~~heating~~, (B2) ~~maintaining~~ and (C) ~~allowing the screw to cool,~~ result in a partial crystallization of ~~the~~ said screw.

16. (Amended) The method of Claim 12, wherein ~~the~~ said screw is composed of 15/85 (vol/vol) blend of TCP/PLA.

17. (Amended) The method of Claim 16 wherein said step (B) ~~of heating~~ includes the step of raising the temperature of ~~the~~ said screw from room temperature to ~~an~~ said elevated temperature, said elevated temperature being ~~of~~ about 70°C and said step (B2) includes the step of holding ~~the~~ said elevated temperature of ~~the~~ said screw at about 70°C for about 4 hours.

18. (Amended) The method of Claim 16 wherein said step (B) ~~of heating~~ includes raising the temperature of ~~the~~ said screw from room temperature to ~~a~~ said elevated temperature, said elevated temperature being ~~of~~ about 70°C and said step (B2) ~~of maintaining~~ includes holding ~~the~~ said elevated temperature of ~~the~~ said screw at about 70°C for about 4 hours, and further comprising the steps (B3) of heating the screw to a temperature of 100°C and (B4) maintaining the 100°C temperature for 8 hours before said step (C) ~~of allowing the screw to cool~~.

19. (Amended) The method of Claim 11, wherein ~~the~~ said screw is heated ~~in~~ during said step (B) to a temperature of about 5°C to 15°C above the glass transition temperature of said screw.

20. (Amended) The method of Claim 10, further comprising the ~~step (D) of withdrawing the screw from the driver and~~ step (E) of replacing ~~the~~ said screw on ~~the~~ said driver in the same relative orientation that ~~the~~ said screw and said driver were in when said step (B) ~~of heating~~ was conducted.